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A method for accessing an additional content with parental control

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#### FIELD OF THE INVENTION

The invention deals with a method for controlling a user's access to an additional content related to a main content from a player designed so as to allow the setting of at least a parental level.

5                   The invention also deals with a portable carrier and with a server storing a program comprising instructions for implementing such a user access control method when said program is executed by a processor.

                  The invention also deals with a player comprising processing means for executing a program comprising instructions for implementing such a user access control  
10   method when a portable carrier storing said program is present in said player.

                  The invention also deals with a system comprising a player, a transmission network, and a server, said player comprising setting means for setting at least a parental level and sending means for sending to said server via said transmission network a user request for access to an additional content related to a main content.

15                   The invention advantageously applies to video discs published with links to web sites offering additional content related to that specific disc. It also applies to video discs published with additional content stored on the disc.

#### BACKGROUND OF THE INVENTION

20                   Japanese abstract 11-225324 describes a system comprising a player in which parental information is set, a disc and a web server. When the disc is in the player, the player can link to the web server to get web pages relating to the disc. The content of the web page is adapted to the parental level set in the player.

                  An object of the invention is to propose a method for controlling the access to  
25   additional content according to parental information, in a context in which users are identified.

## SUMMARY OF THE INVENTION

A user access control method according to the invention comprises a user identification step for identifying said user, said user identification step comprising a parental level recovery step for recovering a parental level set in said player and applicable to said user, and an access control step for controlling said user access depending on the recovered parental level.

With the invention different parental levels can be set for different users in the player, and when a user attempts to access an additional content related to a main content (for instance related to a content stored in a disc that is present in the player), a parental level applicable to that specific user is recovered and used to control the user access.

According to the invention, the parental level recovery step is part of the user identification process.

In a preferred embodiment of the invention, said method is applicable to registered users for which a user identifier and a parental level are stored in a user information database. When a user identifier is provided by the user, the parental level to be applied to that user is recovered in said user information database from the user identifier provided by the user.

## BRIEF DESCRIPTION OF THE DRAWINGS

These and other aspects of the invention are further described with reference to the following drawings:

- Figure 1 is a schematic diagram of a system according to the invention,
- Figure 2 is a schematic diagram of a first embodiment of a user access control method according to the invention,
- Figure 3 is a schematic diagram of a second embodiment of a user access control method according to the invention,

## DESCRIPTION OF A PREFERRED EMBODIMENT

A system according to the invention is described in Figure 1. It comprises a user equipment 10, a transmission network 20 and a server 30.

In a preferred embodiment, the transmission network 20 is the Internet network. This is not restrictive.

The user equipment comprises a player 40, a display unit 42, and a user interaction unit 44. For instance the display unit 42 is a television set. And the user interaction unit 44 is a remote control.

5 The player 40 comprises at least a microprocessor unit 50, a storage unit 51, a detection unit 54, a decoder 56, and a transmission/reception unit 58.

The detection unit 54 is intended for detecting signals recorded on a portable carrier 60. The decoder 56 is intended for processing signals detected by the detection unit 54 or signals read in the storage unit 51. The output of the decoder 56 is applied to the display unit 42 for display.

10 The transmission/reception unit 58 is intended for transmitting/receiving data via the transmission network 20.

The player is designed so as to implement a parental control feature. The concept of parental control is known notably for DVD discs. It consists in indicating one or more parental levels in the disc in association with one or more pieces of content, and to give  
15 the option to set one or more parental levels in the player. At least a default parental level must be set. For instance, different parental levels can be set for different users. When no specific parental level is set for a certain user, the default parental level is applied to that user. When a parental level is applicable, the player will only allow playing a content if the parental level associated with that content is lower than or equal to the applicable parental  
20 level. Advantageously, a personal identification number (PIN code) is requested for setting and changing the parental levels

The server 30 comprises at least a microprocessor unit 70, a storage unit 71, and a transmission/reception unit 76 for transmitting/receiving data over the transmission network 20.

25 The invention deals with a method for controlling a user's access to an additional content that relates to a main content.

In a preferred embodiment the main content is recorded on a portable carrier, for instance on a disc 60. But this is not restrictive. The main content can also be stored in the storage unit 51 of the player 40.

30 Additional contents relating to the main content are recorded on the disc 60 and/or stored remotely in the storage unit 71 of the server 30. An additional content may comprise various types of data, notably audio, video, images, text, fonts, animation, commercial data... For instance the additional content can be a new version of a navigation

menu, supplementary images/text/animations synchronized with a main video content, extra-streamed video or subtitles...

Preferably, the main content includes links to the additional contents that the user can select through the interaction unit 44.

5           The invention applies when the access to an additional content is subject to a user identification. Such a user identification is useful in many applications, for instance in commercial applications (so as to store the user's address and/or credit card information), in multi-user applications, or for content protection purposes. For instance, each user is identified by a user identifier IDu and a user password PWu.

10           The invention consists in adding a parental level control step to the user identification process that is executed when a user attempts to access an additional content.

A first embodiment of a method for controlling a user's access to an additional content will now be described with reference to Figure 2. In this first embodiment, the additional content is located in the server 30.

15           According to Figure 2, at step S0 a disc 60 carrying a main content is inserted in the player 40. The main content carried on that disc comprises a menu that includes a link LK0 toward a home page of the web site of the publisher of the disc. This menu is displayed on the display unit 42 of the user equipment 10. At step S1, the user selects the link LK0 by using the interaction unit 44. At step S2, a connection request CRQ is sent from the player 40  
20 to the server 30. At step S3, the server 30 replies by sending back a home page LP to the player 40. The home page LP comprises a link LK1 toward a user registration application APPL-R and a link LK2 toward a user identification application APPL-I.

Both the user registration application APPL-R and the user identification application APPL-I are stored in the storage unit 71 of the server 30.

25           Upon selection of the link LK1 (step S4), the player 40 sends a registration request RRQ to the server 30 (step S5). Upon reception of a registration request RRQ, the server 30 executes the user registration application APPL-R. This comprises:  
- prompting the user to input his user identifier IDu and his user password PWu (step S10);  
- asking for the parental level PLu currently applied by the player 40 (step S20);  
30 - recording the user identifier IDu, the user password PWu and the applicable parental level PLu in a user database UDB-S stored in the storage unit 71 of the server 30 (step S30).

Upon selection of the link LK2 (step S40), the player 40 sends an identification request IRQ to the server 30 (step S50). Upon reception of an identification request IRQ, the server 30 executes the user identification application APPL-I. This

comprises:

- prompting the user to input his user identifier IDu and his user password PWu (step S60);
- checking the user identifier IDu and the user password PWu by referring to the user database UDB-S (step S70);
- 5 - recovering in the user database UDB-S the parental level PLu corresponding to the user identifier IDu (step S80);
- sending to the player 40 a personalized page PP offering to the user additional contents Ci (i being an integer) that are compliant with the recovered parental level (step S90).

10 A second embodiment of a method for controlling a user's access to an additional content will now be described with reference to Figure 3. In this second embodiment, the additional content is stored on the disc 60.

According to Figure 3, at step S100 a disc 60 carrying a main content and an additional content is inserted in the player 40. The main content carried on that disc comprises a menu that includes a link LK1' toward a user registration application APPL-R' and a link LK2' toward a user identification application APPL-I'.

Both the user registration application APPL-R' and the user identification application APPL-I' are stored on the disc 60.

20 Upon selection of the link LK1' by the user (step S101), the player 40 reads the user registration application APPL-R' on the disc 60 (step S102). Then at step S103, the player 40 executes the user registration application APPL-R'. This comprises:

- prompting the user to input his user identifier IDu and his user password PWu (step S110);
- asking for the parental level PLu currently set in the player 40 for that user (step S120);
- recording the user identifier IDu, the user password PWu and the applicable parental level PLu in a user database UDB-P stored in the storage unit 51 of the player 40 (step S130).

25 Upon selection of the link LK2' by the user (step S201), the player reads the user identification application APPL-I' on the disc 60 (step 202). Then at step 203, the player executes the user identification application APPL-I'. This comprises:

- prompting the user to input his user identifier IDu and his user password PWu (step S210);
- checking the user identifier IDu and the user password PWu by referring to the user database UDB-P (step S220);
- 30 - recovering in the user database UDB-P the parental level PLu corresponding to the user identifier IDu (step S230);
- displaying on the display unit 42 a personalized page PP offering to the user additional

contents  $C_i$ ' (i being an integer) that are compliant with the recovered parental level (step S240).

5 With respect to the described system, player, server and user access control method, modifications or improvements may be proposed without departing from the scope of the invention. The invention is thus not limited to the examples provided.

In particular in the embodiments described with reference to Figures 2 and 3, the links toward the registration application and the link toward the user identification application are proposed on a same page. This is not mandatory. In alternative embodiments, these two links can be proposed on different pages.

10 In the embodiments described with reference to Figures 2 and 3, the links are selected by the user. But it is also possible that a link to an additional content is established automatically without any selection by the user.

The word "comprising" does not exclude the presence of elements or steps other than those listed in the claims.